

### **REMARKS**

Claims 2-4, 10-21, 26-28, 32, 33, 48, 49, 73, 74, 76-78 and 81-86 are pending in the application, with claims 26-28, 32, 33, 48, 49, 73, 74 and 81-86 being withdrawn.

The Examiner rejected claims 2-4, 10-12, 14-16 and 18-20 under 35 U.S.C. 102(b) as being anticipated by Elek et al., *Admission Control Based on End-to-End Measurements* (“Elek”) and rejected claims 13, 17, 21 and 76-78 under 35 U.S.C. 103(a) as being unpatentable over Elek in view of USPN 6,097,722 to Graham et al. (“Graham”). For the reasons set forth below, the rejections are traversed.

### **Elek Does Not Describe the Claimed Invention**

Claims 2 and 10 require estimating “according to a communication quality level of the preceding trial-class packets whether or not it is possible to send packets of the trial class”, claims 3 and 14 require estimating “whether or not it is possible to send packets of the trial class according to an execution probability . . . estimated from a communication quality of the preceding trial-class packets”, and claims 4 and 18 require that if the communication quality becomes insufficient, “immediately stopping” “to send packet of the trail class and continuously stopping to send packets of the trial class for a second predetermined period.”

Elek does not describe using a communication quality level or an execution probability that is based on preceding trial-class packets, as required by claims 2, 3, 10 and 14. Claim 2 requires sending packets of a trial class for a predetermined period, estimating whether or not the communication quality of the packets is sufficient, and if it is insufficient, stopping to send packets of the trial class for a second predetermined period. After the second predetermined period, the claimed retry method estimates according to a communication quality level of the preceding trial-class packets whether or not it is possible to send packets of the trial class and if it is possible, it again begins sending packets of the trial class.

Elek describes a retry method that uses only a back-off time. Probes are sent to a destination for a time period selected by the sender. At the end of the time period, the destination sends a measurement report to the source which includes the number of probe packets received. If the set up is blocked based on the content of the measurement report, then the source backs off for a random time before issuing a new probe. The relevant sections of Elek that describe its use of back-off time are set forth below.

The loss rate that the probe experiences is used to make a decision of whether the session can be established. The probe can be unsuccessful due to temporal network overload or contending probe processes. In this case the session establishment fails, and the sender must back off a random time before issuing a new probe. Persistent overload can be avoided by a proper allocation of capacity to the service class.

Note that only loss and not delay is considered by the admission control for the service; delay is instead limited by the use of small buffers in the nodes which should only provide packet-scale buffering.

Elek, Section II (B) paragraphs 3 and 4.

The sender probes for a time period that it chooses itself. Each probe packet includes specification of the probe duration and transmission rate as well as a session identifier. It may also carry information about the session such as specification of the source and channel encodings, but not user data.

The destination counts the received packets until the the [sic] probe time period expires. After that it sends a measurement report to the source which consists of the number of probe packets received. The measurement report is carried with high priority to ensure that it is transmitted with low loss.

Based on the measurement report the source decides about the admission. If the calculated probe loss probability is below a threshold, the source may start the CLS session. The threshold is specified in the service contract and all parties sharing the service must use the same value. The receiver continues to measure losses for the established CLS connection and sends periodic feedback to the source for the tuning of the error-control code. The sender may at any time reduce the value of the established bit rate or close the connection. The peak bit rate may only be raised by a new probe to the same receiver.

If the setup is blocked, the source backs off a random time before issuing a new probe. The back-off time is drawn from a uniform distribution of some width, which is doubled for each consecutively blocked attempt to reach the same receiver.

Elek, Section II (C) paragraphs 2-5.

In rejecting claims 2 and 10, the examiner alleged that Elek describes that after waiting a random time, the probes are reissued based on capacity available and loss rate and equated this to the claimed communication quality. Office Action, p. 4. However, claims 2 and 10 require a communication quality level of the preceding trial-class packets. The cited sections of Elek do not describe using any information about the preceding probe packets to determine when to restart sending probes. Instead probes are sent at the end of the random time period. Thus, the cited sections of Elek do not describe each and every element of claims 2 and 10.

In rejecting claims 3 and 14, the examiner alleged that Elek describes that after waiting a random time the probes are reissued based on capacity available and loss rate, “meaning communication quality, probe loss determined by probabilities such as equations,  $P_{cls}$ ,  $P_{pr}$  and  $P_{ex}$ .” Office Action p. 5. The equations referenced by the examiner,  $P_{cls}$ ,  $P_{pr}$ , and  $P_{ex}$ , are described in the section entitled “*The Evaluation of the Admission Control Method*” and are used to measure the performance of the admission control method described in the paper. Elek, Section III, paragraph 1.  $P_{cls}$  measures the loss probability for the established session,  $P_{pr}$  measures the loss probability of the probe stream (low priority stream), and  $P_{ex}$  measures the measured loss probability. Elek, Section III(A).

Claims 3 and 14 require an execution priority estimated from a communication quality of the preceding trial-class packets. As described above in connection with claims 2 and 10, Elek does not use information about the preceding probes to determine when to start sending probes again. Since the equations,  $P_{cls}$ ,  $P_{pr}$ , and  $P_{ex}$  measure the performance of the admission control method and the admission control

method does not use information about the preceding probes, the cited sections of Elek do not describe each and every element of claims 3 and 14.

Elek does not describe that the trial class packets are stopped immediately if the communication quality of the packets are insufficient and are continuously stopped for a second predetermined period of time, as required by claims 4 and 18. Claim 4 recites estimating from time to time whether or not the communication quality of the packets is sufficient and if it is insufficient, immediately stopping to send packet of the trial class and continuously stopping to send packets of the trial class for a second predetermined period.

In rejecting claims 4 and 18, the examiner alleged that Elek describes that the sender stops for a random time before issuing a new probe. Office Action, p. 5. Elek describes that if the session establishment fails, then the sender must back off a random time before issue a new probe. However, to determine whether the session establishment fails, the probes are sent for a period of time selected by the sender. The cited sections of Elek do not describe stopping the probes prior to the expiration of the sender selected time period. Thus, Elek does not describe each and every element of claims 4 and 18.

Claim 76 depends from claim 2, claim 77 depends from claim 3, claim 78 depends from claim 4, claims 11-13 depend from claim 10, claims 15-17 depend from claim 14, and claims 19-21 depend from claim 18. The dependent claims are patentable for at least the same reasons as the independent claims and may be patentable for additional reasons as well.

### **INTERVIEW SUMMARY**

A telephone interview was conducted between the examiner, Examiner Phillips and the undersigned on September 9, 2010. Differences between claims 2, 3 and 4 and Elek were discussed. No agreement was reached.

**CONCLUSION**

The application is believed to be in condition for allowance and a notice of allowance is respectfully requested. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799. The Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account 11-0855.

Respectfully submitted,

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